

A NEW SPECIES OF FORSTERONIA FROM THE AMAZON

Joseph V. Monachino

Some species of Apocynaceae, and of other families too, have a vast distributional range in South America. For instance, Prestonia acutifolia (Benth.) K. Sch. is known from Central America or Mexico to Argentina. P. coalita (Vell.) Woods., until Woodson's monograph in 1936 known from only southern Brazil (as far south as Rio Grande do Sul) and later found also in Paraguay, was subsequently determined from British Guiana (Monachino, *Brittonia* 7: 410. 1952), and now can be reported from Peru (G. Klug 4091, Dept. San Martín, Chazuta, Rio Huallaga, alt. about 260 m., forest, Apr. 1935) and northern Venezuela (A. H. G. Alston 5990, State of Carabobo, near Las Trincheras, alt. 800 m., forest, Dec. 23, 1938). Consequently, this species is now ascertained to have a distributional range of approximately 3000 miles, a distance surpassing the entire width of the United States. Forsteronia Duckei Mgf.*, previously known from only the type collected in Pará, Marajó, can now be reported from Esperança (Ducke 1889, ad ostium fluminis Javary, silva non inundabili, Oct. 29, 1945) and São Paulo de Olivença (Krukoff 8121, near Palmares, Varzea land, Sept. 11-Oct. 26, 1936), in western Amazonas, Brazil, some 1500 miles from the type locality. Another species of *Forsteronia* collected in the same localities, Esperança and São Paulo de Olivença, by the same men at about the same time, is here proposed as new. At present its known range is limited to the one area, but it remains to be seen how truly restricted may be its distribution. Probably the plant, difficult to collect because it is a tall vine in high forests, will eventually be discovered in a much wider region in the Amazon Basin, and the specific name is chosen in anticipation of this.

FORSTERONIA AMAZONICA Monachino, sp. nov.

Frutex scandens, caulibus juvenilibus puberulentis, foliis chartaceis, petiolis 5-7 mm. longis puberulis, laminis ellipticis 8-11.5 cm. longis 3.5-5 cm. latis acuminatis, ad basin rotundatis, glandis basi costae conspicuis; inflorescentiis spiciformibus confertis usque ad 4 cm. longis 1.5 cm.

*The two specimens cited (deposited at NYBG) and an isotype (USNH) have some flowers with imbricate corolla-lobes, a type of aestivation unusual for the Apocynaceae. In the family the corolla-lobes are normally convolute, either dextrorsely or sinistrorsely depending on the genus.

latis, pedunculo usque ad 2.3 cm. longo hirtello, pedicellis usque ad 2 mm. longis; calyce hirtello, lobis ca. 2 mm. longis, squamellis lobos oppositis; corolla extus hirtella, tubo 1.3-1.4 mm. longo, intus barbato, lobis 2.7-3.4 mm. longis intus villosulis; antheris toto exsertis 2 mm. longis glabris; ovario apocarpio hirtello.

Woody vine, young stems puberulent, leaves opposite, chartaceous, petiole minutely hairy particularly on the upper side, 5-7 mm. long, blade elliptic, 8-11.5 cm. long, 3.5-5 cm. broad, abruptly acuminate at apex, rounded at base, glabrous (very sparsely ciliate on margins and puberulent on nerves on underside), glands at base of midrib conspicuous, often running down the channel of petiole, foveae minute; inflorescence spiciform, crowded, cylindrical, up to 4 cm. long, 1.5 cm. broad, peduncle up to 2.3 cm. long, rusty puberulent-hirtellous, bractlets at base of pedicel similar to but smaller than sepals, up to 1.5 mm. long, pedicel up to 1.7-2 mm. long; calyx 1-1.7 mm. broad at base, lobes not foliaceous, deltoid-lanceolate, ca. 2 mm. long, acute at apex, hirtellous outside, calycine squamellae rather weak, opposite lobes, medially located, laciniate; corolla white, moderately or rather heavily hirtellous outside, tube ca. 1.3-1.4 mm. long, bearded within above base, lobes dextrorsely convolute, lanceolate-ligulate, 2.7-3.4 mm. long, villosulose within; anthers wholly exserted, 2 mm. long, glabrous, filaments inserted near base of corolla-tube, becoming ca. 2 mm. long; ovary apocarpus, pubescent, tapering at apex, style 1 mm. long, narrowly conic stigmas about as long, with acute apiculi, apices of filaments and style agglutinated, anthers forming a ring around stigma, nectaries deltoid, shorter than ovary, ca. 0.4 mm. long.

Type: Ducke 1891, Brazil, Amazonas, Esperança, ad ostium fluminis Javari, silva non inundabili, frutex scandens floribus albidis, Oct. 20, 1945 (holotype at The New York Botanical Garden). Paratype: B. A. Krukoff 9048, Brazil, Amazonas, basin of Rio Solimoes, Municip. São Paulo de Olivença, basin of creek Belen, approx. 20 kilom. from Colombian border, terra firma, high forest, vine, Oct. 26-Dec. 11, 1936 (The New York Botanical Garden).

The type and paratype of F. amazonica are almost identical. The species is very closely allied with F. tarapotensis K. Sch. ex Woodson and is found in the same phytogeographical province. It differs in its broader leaves, rounded and strongly glandular at the base; the young stems are puberulent and so are the petioles, particularly on the upper side. The inflorescence is broader and the pedicels are longer. F. tarapotensis has leaves less than 3 cm. wide, broadly cuneate and inconspicuously glandular at the base; the stems and petioles are glabrous or nearly so, and the pedicels are described as 0.4-0.5 mm. long. Woodson's description (Ann. Mo. Bot. Gard. 22: 195. 1935) was based on four collections, all from two neighboring localities (Tarapoto and Yurimaguas) in Peru; another collec-

tion made approximately 450 miles away, at a locality geographically close to that of the type of F. amazonica, Ducke 23939, Tabatinga, Amazonas, Brazil, also agrees with the type photo of F. tarapotensis.

Another species with spiciform inflorescences, the Colombian F. propinqua Woodson, which like F. amazonica has leaves rounded at the base, is readily separated by its very short pedicels and sparsely pubescent calyx and corolla; the corolla is almost glabrous without, the indumentum on the stem and pedicels is of longer and stiffer hairs, and the glands at base of the leaf-blades are inconspicuous. This species is allied with F. spicata (Jacq.) G. F. W. Meyer, on basis of its syncarpous ovary; unlike F. tarapotensis, it differs from F. amazonica in fundamental features.

BOOK REVIEWS

Alma L. Moldenke

"Plants of the Bible", by A. W. Anderson; 72 pp., 12 pl. Philosophical Library, New York 16, N. Y. 1957. \$6.

This book is very interesting in its writing style, pleasing in format, informative in content, and attractive in its illustrations.

There are twelve lovely color plates, such as those by the artist Redouté, reproduced from rare tomes long since out of print and now available only in a few botanical and museum libraries and in the carefully protected cases of a few bibliophiles. Even though the present-day mass production method of color plate printing cannot yet repeat the exquisite beauty of the older individually tinted ones, it has the advantage of greater numbers and lower prices. Consequently these "things of beauty" have a renewed chance of becoming "a joy forever" for so many, many more casual readers and students of this book and any other one similarly produced. Thus this book perpetuates very appropriately these artistically beautiful and scientifically accurate treasures of the past.

The text evidences the author's careful study of the subject and his competence in evaluating his findings. For almost all of his identifications of Bible plants he has either the full approval of past and present authorities in this field or else their concession as to the possibility of his determination.

Anderson suggests the leaves of Ficus sycomorus for the modest aprons of Adam and Eve, while it is generally supposed that they were made from the related F. carica. The latter interpre-